EXAMINING THE COUNTERPRODUCTIVE WORK BEHAVIOR PROCESS: MOMENTARY RELATIONSHIPS AMONG PERSONALITY, AFFECT, & SITUATIONAL STRENGTH

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EXAMINING THE COUNTERPRODUCTIVE WORK BEHAVIOR PROCESS: MOMENTARY RELATIONSHIPS AMONG PERSONALITY, AFFECT, & SITUATIONAL STRENGTH

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DEDICATION

This work is dedicated to the memories of my grandparents, Mary and Ernest Gaskins, my uncle, Lloyd J. Davenport, and Dr. Lawrence R. James, whose commitments to knowledge, integrity, and excellence as human beings influenced my life, work, and worldview in ways that defy description.

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SUMMARY

Counterproductive work behavior (CWB) is a pervasive threat to individual, organizational, and societal well being. Consequently, CWB has received a great deal of attention in scholarly research. However, recent empirical findings and theoretical developments suggest that the study and prediction of such behavior might be substantially enhanced by more closely examining the complex cognitive and affective mechanisms underlying CWB. Toward this end, the current research used ecological momentary assessment (EMA) to examine the influences of personality and situational strength on cognitive and affective states theoretically underlying CWB. Perceptions of situational strength showed significant within-person variability; and all facets of situational strength were significantly associated with state negative affect. Among those with lower standing on aggression, higher levels of constraints and consequences were positively associated with negative affective reactions. Analyses also revealed a significant indirect effect of perceived constraints on counterproductive work behavior, through state negative affect, among those higher on aggression. Theoretical, empirical, and practical implications of these findings are discussed herein.

CHAPTER 1

INTRODUCTION

Counterproductive work behavior (CWB) has pervasive, deleterious effects on the well-being of organizations, their members, and, by extension, society (Kisamore, Jawahar, Liguori, Mharapara, & Stone, 2010). When workers engage in CWB, productivity, profits, colleagues, and even employees' families, may all be negatively affected. Unsurprisingly, scholar and practitioner efforts to better understand CWB have generated a substantial body of literature on the topic. Unfortunately, this literature has traditionally favored between-person approaches, which narrowly focused on *either* individual differences *or* situational influences (Dimotakis, Ilies, & Mount, 2008); and did so at the expense of better understanding the role of person-situation influences in individuals' momentary appraisals of, and responses to, contextual information. Consequently, such approaches often ignore contemporary, process-based conceptualizations of CWB (e.g., Colbert, Mount, Harter, Witt, & Barrick, 2004; Spector & Fox, 2005; Spector, 2011).

Recent integrative theorizing, however, posits that CWB is the product of a complex psychological process in which one's personality influences his/her cognitive and affective responses to environmental information (Dimotakis et al., 2008; Spector, 2011). These responses subsequently influence individuals' identification of, and selection among, viable behavioral alternatives (James, 1998; Mischel, 1977). Situational strength (i.e., the perceived salience of cues regarding the appropriateness of behavioral options in a given context) is one means of representing individuals' interpretations of

environmental information. Recent developments regarding situational strength as a contextual source of behavior-relevant information (Meyer, Dalal, & Hermida, 2010), suggest that it is reasonable to expect that individuals' perceptions of, as well as cognitive and affective reactions to, situational strength will vary according to their individual differences profiles. Combining these two perspectives, individuals who are likely to negatively interpret strong situational cues (e.g., as ego threats or attempts to frustrate or harm them) are, therefore, more likely to subsequently experience negative affective reactions that promote counterproductive work behavior (James & McIntyre, 2005; Penney & Spector, 2005; Spector & Fox, 2002; Spector, 2011).

The current research used ecological momentary assessment (EMA) to conduct a partial test of Spector's (2011) theoretical model of counterproductive work behavior (described in greater detail in the following section). This theoretical framework was used to examine four major propositions: (a) situational strength shows substantial momentary variability, (b) momentary variability in situational strength is significantly related to momentary variability in CWB; (c) situational strength affects CWB through state negative affect; and (d) Implicit Aggression and trait Narcissism moderate the proposed mediation effects, such that those effects are stronger among those with higher standing on either trait. Thus, the overarching expectation is that the processes underlying counterproductive behavior take the form of a within-person moderated, lower level mediation relationship catalyzed by affective reactions to situational perceptions.

Counterproductive Work Behavior

Counterproductive work behavior (CWB) is voluntary behavior that is inconsistent with organizational norms, counter to legitimate organizational goals, and foreseeably

harmful to an organization or its members (James, 1998; Marcus & Schuler, 2004; Robinson & Bennett, 1995; Sackett, Berry, Wiemann, & Laczo, 2006). Absenteeism, production deviance, workplace aggression, and sabotage are all examples of behavior covered by this definition of CWB. Unintentional or accidental acts lack the *volition* component critical to CWBs (Spector & Fox, 2010a, 2010b), and thus do not qualify as counterproductive work behaviors under the conceptualization adopted herein.

In formulating a recent theoretical model integrating perspectives and findings from several disciplines, Spector (2011), conceptualized counterproductive work behavior as the result of a complex process through which "individuals are exposed to the environment, appraise that environment and make attributions for the causes of events and the intentions of actors [therein], respond emotionally, and engage in behavior" (Spector, 2011, p. 344). This joint influence of person and situation variables on cognition, affect, and behavior is central to this and other contemporary models of the CWB process (e.g., Fox, Spector, & Miles, 2001; Fox & Spector, 1999; Penney & Spector, 2005; Rotundo & Sackett, 2002). Specifically, "it is the combination of cognition and emotion in interaction with personal factors that result in the decision to engage in [a]...counterproductive act" (Spector, 2011, p. 344).

This theoretical perspective suggests that counterproductive work behaviors follow negative affective reactions to environmental information perceived as (a) unpleasant or stressful (i.e., *provocations*); (b) *opportunities* for goal attainment; or (c) *incentives* to secure a desired objective or outcome through illegitimate means (Anderson & Bushman, 2002; Spector, 2011). That is, when individuals experience negative cognitive and emotional reactions to a given situation, they will be more likely to engage in CWB

(Anderson & Bushman, 2002; Spector, 2011). Moreover, it is reasonable to expect that the cognitive and affective processes of those whose individual differences profiles predispose them to negative reactions would exhibit a higher incidence of counterproductive work behavior (Spector, 2011).

Unfortunately, however, a literature comprised primarily of between-person/cross-sectional approaches has not provided sufficient empirical tests of the aforementioned propositions. Specifically, a lack of within-person research in relevant domains has precluded close examinations of the specific experiences likely to lead to negative affective states and, subsequently, counterproductive acts among some individuals. The current study addresses this gap in the literature by investigating the role of one conceptualization of work contexts (i.e., perceived situational strength) that may contribute to this process.

Situational Strength as a Representation of Environmental Information

In work situations, individuals rely on a variety of sources for information as to appropriate behavior. While some sources provide objective information (e.g., temperature, time, object location), others present information that individuals must interpret. Employees assign psychological meaning to this otherwise ambiguous information in accordance with their respective individual difference profiles (Bowers, 1973; Deci & Ryan, 1987; Endler & Magnusson, 1976; Hattrup & Jackson, 1996; Mischel, 1973). Based on their subsequent conclusions, individuals (a) identify viable behavioral options; (b) select the alternative leading to the most highly valued outcome(s); and (c) subsequently engage in the selected behavior(s) (Mischel, 1973, 1977). By presenting stimuli, constraining individual freedoms, and imposing

consequences (Forehand & von Haller Gilmer, 1964; Meyer et al., 2014), situational perceptions influence individual judgments about the availability, viability, and utility of behavioral alternatives. Consequently, these perceptions serve as one potential initial input (i.e., provocations, incentives, and opportunities) to process-based models of counterproductive work behavior (e.g., Spector, 2011).

Two key factors (i.e., individual differences and cues from situations) influence the previously described identification of, and selection among, behavioral alternatives (Mischel, 1977). The strength of a given situation appreciably influences the extent to which either factor affects individual behavioral outcomes. Specifically, situations are *strong* insofar as they "lead everyone to construe the particular events the same way, induce uniform expectancies regarding the most appropriate response pattern, provide adequate incentives for the performance of that response pattern and require skills that everyone has to the same extent" (Mischel, 1977, p. 347). Situations are *weak* to the extent that they fail to meet any or all of these criteria and, thus, promote the formulation of person-dependent interpretations.

A four-facet conceptualization of situational strength facilitates parsimonious categorization of many operationalizations of this construct (Meyer et al., 2014, 2010). *Constraints*, as suggested by earlier researchers (e.g., Beaty, Cleveland, & Murphy, 2001; Bennett & Robinson, 2000; Colbert et al., 2004; Mischel, 1977), are perceived situation-specific restrictions on the range of available behavioral alternatives, or limitations on opportunities to select among those alternatives (Meyer & Dalal, 2009; Mischel, 1977). *Consequences*, analogous to *outcomes* in Mischel's (1977) discussion of behavior-outcome expectancies, are the perceived magnitude and subjective value of positive or

negative effects associated with each behavioral alternative available to an individual (Meyer & Dalal, 2009). *Clarity* describes a perceived lack of ambiguity in the information individuals receive regarding behavioral options (Meyer et al., 2010). *Consistency* is the extent to which behavioral cues received from multiple sources in a given situation convey similar messages (Meyer et al., 2010).

Given the presence of significant within-person *behavioral* variability (Fleeson & Wilt, 2010), and the relative stability of personality traits, it stands to reason that a third variable must influence the aforementioned variability (Funder, 2006). In order to produce within-person variability, that third variable would itself have to demonstrate significant within-person variability. Given that organizational environments are unlikely to remain static over long periods of time, and that situational strength has been argued and shown to influence behavior (Meyer et al., 2014; Mullins & Cummings, 1999; Smithikrai, 2008; Stewart & Barrick, 2004), situational strength is a viable candidate for the aforementioned third variable role.

H_1: Situational strength facets show significant within-person variability.

Despite substantial variety in the *ad hoc* operationalizations used, the early literature on situational strength fostered a consensus that the moderating effect of situational strength on personality-behavior relationships was such that these relationships would be universally stronger in weak situations, and weaker in strong situations (Cooper & Withey, 2009). However, recent findings suggest that the aforementioned consensus may have been premature; and that the role of situational strength in voluntary work behavior may be more complex than previously thought. For example, a study of the respective relationships of Agreeableness and Conscientiousness

with CWB yielded results demonstrating significant patterns of moderation in which personality-behavior relationships were stronger in strong situations and weaker in weak situations (Meyer et al., 2014).

One potential explanation for those unexpected findings is that participants' individual difference profiles led them to assign negative psychological meaning to strong situations, and to subsequently exhibit negative responses thereto (Meyer et al., 2014). In such a scenario, individual difference profiles that increased sensitivity/reactivity to efforts to influence behavior would be associated with stronger personality-behavior relationships in stronger situations and vice versa. As outlined previously, contemporary theories of counterproductive work behavior support this proposition, modeling CWB as the product of complex interactions among dispositional variables and emotional reactions to cognitive appraisals of environmental stimuli (Spector, 2011). Toward clarifying the role of situational perceptions in the aforementioned interactions, the current study empirically tested the proposition that situational strength would predict affective states, as well as subsequent behavioral outcomes.

Affective Influences on the CWB Process

Individuals high on trait Negative Affectivity (NA), a general tendency to experience negative emotions, are predisposed to negative interpretations of, as well as negative emotional and behavioral reactions to, environmental information (Hershcovis et al., 2007; Penney & Spector, 2005; Spector, 2011; Watson & Clark, 1984). Although trait NA is an important influence on processes that theoretically contribute to CWB, the related (though not isomorphic) concept of state negative affect is

more proximal to momentary engagement in CWB. Specifically, an individual's momentary psychological state is likely a more immediate influence on whether that person engages in CWB (Spector & Fox, 2002). Considering these arguments alongside those of Meyer, et al. (2014), and Spector's (2011) process model of CWB, it was expected that state negative affect would predict momentary engagement in CWB.

H_2: State negative affect is positively associated with CWB.

Though the relationship between state negative affect and CWB is well established (e.g., Hershcovis et al., 2007; Penney & Spector, 2005), there is less consensus about how to conceptualize the experiences that promote negative affective states. For example, Spector's (2011) integrative model of CWB offers that personality-influenced appraisals of one's environment, in interaction with traits that increase sensitivity to environmental stimuli (i.e., *incentives*, *opportunities*, and *provocations*) and negatively bias appraisals thereof, increase the likelihood of negative emotional experiences. It follows from Spector's (2011) suggestion, and those from earlier relevant findings, that empirical examination of a process-based model of CWB would benefit from conceptualization and assessment of environmental variables in ways that incorporate individual's subjective appraisals thereof.

While there is, as alluded to previously, no true consensus around the nature and structure of work contexts, situational strength has shown some promise as a means of assessing individual's subjective experiences and appraisals of their work environments (Meyer et al., 2014). Thus, the effects of situational strength on the aforementioned CWB process were examined here, with the expectations that among individuals high on traits that increase sensitivity to environmental stimuli, and/or predispose them to negative

reactions to contextual perceptions, perceived situational strength would (a) significantly affect state negative affect, and (b) significantly affect counterproductive work behavior through its effects on state negative affect. In the next section, the rationale underlying these expectations is explained in greater detail.

Personality in the CWB Process

Direct relationships between personality and counterproductive work behavior are well documented (e.g., Cullen & Sackett, 2003; Marcus & Schuler, 2004; Mount, Ilies, & Johnson, 2006). Personality has also been shown to *indirectly* influence voluntary work behavior by (a) shaping employee perceptions of relevant events; (b) moderating relationships between organizational factors and employee perceptions; and (c) influencing cognitive and affective reactions to contextual perceptions (e.g., Cullen & Sackett, 2003; Flaherty & Moss, 2007; Mischel, 1977; Mount et al., 2006). Most apropos to the current research effort, some traits are likely to encourage individuals to negatively interpret events or interactions as provocations, leading to negative affective responses, and subsequent engagement in counterproductive work behavior (Andersson & Pearson, 1999; Baumeister, Smart, & Boden, 1996; Bettencourt, Talley, Benjamin, & Valentine, 2006; Bushman & Baumeister, 1998; James, McIntyre, Glisson, Bowler, & Mitchell, 2004; Skarlicki & Folger, 1997; Spector, 2011).

The remainder of this section describes the anticipated role of two key personality traits, trait Narcissism and Implicit Aggression, as moderators of state negative affect's mediating effects on situational strength-CWB relationships at the facet level. Figure 1 depicts a moderated lower level mediation process in which state negative affect mediates situational strength-CWB relationships, and the strength of that mediation varies as a

function of personality. Moderated multilevel mediation occurs when "the strength of the indirect effect of the Level 1 predictor…depends on the Level 2 predictor…" (Bauer, Preacher, & Gil, 2006, p. 153).

Figure 1. Hypothesized Moderated Lower Level Mediation Model

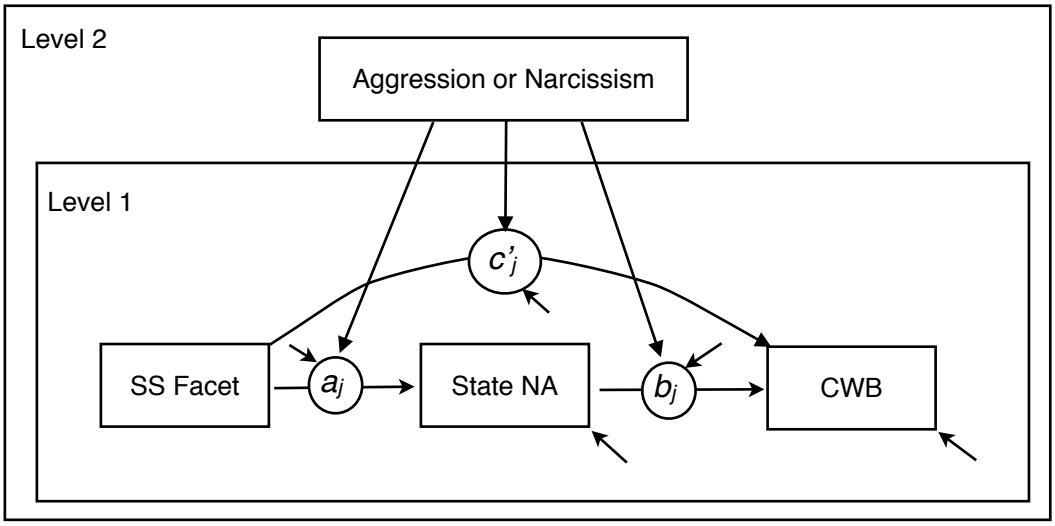

Figure 1. Moderated lower level mediation model: Nested frames indicate levels of sampling, boxes represent variables, arrows without circles indicate fixed effects, arrows with circles represent random effects, and arrows not originating from variables denote residuals. The direct effects of momentary perceived situational strength on state negative affect, and of state negative affect on counterproductive work behavior, are labeled a_j and b_j, respectively. The direct effect of momentary perceived situational strength on counterproductive work behavior is represented by c'_j. Tested models included *either Implicit* Aggression *or* trait Narcissism at each testing instance. Arrows from the Level 2 variable to the random effects indicate moderation of the hypothesized causal effects (i.e., a_j, b_j, c'_j). Notation, description, and model structure adapted from Bauer, D. J., Preacher, K. J., & Gil, K. M. (2006). Conceptualizing and testing random indirect effects and moderated mediation in multilevel models: New procedures and recommendations. *Psychological Methods, 11*(2), 142-163.

Trait Narcissism

Individuals high on trait Narcissism have been characterized as exceptionally sensitive to environmental information perceived as criticism, insult, or ego threat and are likely to respond with anger and aggressive behavior (Baumeister et al., 1996; Bushman & Baumeister, 1998), including CWB (James et al., 2004; Spector, 2011). Thus, those high on trait Narcissism are especially likely to negatively interpret perceived high levels

of any situational strength facet as criticism and, therefore, as a threat to their ego because attempts to influence, correct, or punish their behavior would imply that they were or could be incorrect. Since Narcissistic individuals view themselves and their behavior as beyond reproach, such implications are likely to prompt negative interpretations and affective reactions.

For example, a Narcissistic individual could interpret the imposition of constraints that restrict work autonomy as a suggestion that the organization does not view them as independently competent to carry out their tasks. Along similar lines, an individual high on trait Narcissism might interpret the imposition of negative consequences as an implication that they, who view themselves as nearly infallible, have done something incorrectly. In either scenario, a Narcissistic individual would experience negative cognitive and affective reactions, and be more likely than a less Narcissistic individual to subsequently engage in counterproductive work behavior. Those with higher standing on trait Narcissism might also negatively interpret higher levels of clarity and consistency, particularly in instructive communication, as excessive and as an indication that others doubt their abilities. Here again, such an interpretation would theoretically lead to negative emotional reactions (e.g., anger) and, subsequently, to CWB (Baumeister et al., 1996; Bushman & Baumeister, 1998; Spector, 2011).

H_3: Among those high on trait Narcissism, situational strength facets significantly influence state negative affect. Specifically,

H_{3a}: Constraints are positively associated with state negative affect.
H_{3b}: Consequences are positively associated with state negative affect.
H_{3c}: Clarity is positively associated with state negative affect.
H_{3d}: Consistency is positively associated with state negative affect.

H_4: Trait Narcissism moderates the mediating effect of state negative affect, such that the indirect effects of situational strength facets on CWB are stronger

among those with higher standing on trait Narcissism.

Implicit Aggression

Implicit Aggression refers to a cognitive orientation characterized by an unconscious desire to inflict harm, accompanied by a self-concept that emphasizes morality, stability, and responsibility (James et al., 2004; James & McIntyre, 2005). The reasoning processes of those with high standing on this trait are consistently guided by one or more justification mechanisms (e.g., *hostile attribution bias*, *victimization by powerful others bias*), which are "biases that implicitly shape reasoning so as to enhance the rational appeal of aggression" (James & McIntyre, 2005). Consequently, implicitly aggressive individuals are biased toward negative interpretations of, and negative emotional and behavioral reactions to, their experiences, and thus more prepared to rationalize subsequent aggression (Anderson & Bushman, 2002; Berry, Ones, & Sackett, 2007; Bettencourt et al., 2006; Dodge & Crick, 1990; James et al., 2004).

It follows that implicitly aggressive individuals are generally more likely than their more pro-social counterparts to interpret restrictive or punitive policies and procedures (e.g., prohibitive or corrective human resource management interventions) as malevolent attempts to control or persecute them. These individuals are also more likely to subsequently respond to their negative attributions with anger or aggressive behavior (Bettencourt et al., 2006; Detert, Treviño, Burris, & Andiappan, 2007; Douglas & Martinko, 2001; James et al., 2004; James & McIntyre, 2005). This combination of negative cognitive and affective responses to constraints and consequences increases the probability of subsequent CWB, which implicitly aggressive individuals are likely to view as justifiable responses to (perceived) injustices, slights, or

frustrations intentionally orchestrated by others (Anderson & Bushman, 2002; James, 1998; Miles, Borman, Spector, & Fox, 2002; Spector & Fox, 2005).

Lower levels of clarity and consistency, particularly when associated with organizational communication around changes or personnel actions, may serve as provocations toward counterproductive work behavior among those high on Implicit Aggression. Given that these individuals are predisposed to negative attributions and affective responses, leaving anything open to interpretation increases the likelihood of negative conclusions (e.g., intentional injustice, unfairness), and that of subsequent negative affective and behavioral responses (James et al., 2004; Spector, 2011). For example, implicitly aggressive individuals might interpret inconsistent, ambiguous, or delayed information provision as intentional, malicious attempts to undermine, slight, or to deliberately confuse and frustrate them. Such an interpretation would increase the likelihood of both negative affective responses (e.g., anger, frustration) and of subsequent engagement in CWB (Anderson & Bushman, 2002; Bettencourt et al., 2006; Douglas & Martinko, 2001; James et al., 2004; James & McIntyre, 2005; James, 1998).

H_5: *Among those high on Implicit Aggression, situational strength facets significantly affect state negative affect. Specifically,*

- H_{5a}: *Constraints are positively associated with state negative affect.*
- H_{5b}: *Consequences are positively associated with state negative affect.*
- H_{5c}: *Clarity is negatively associated with state negative affect.*
- H_{5d}: *Consistency is negatively associated with state negative affect.*

H_6: *Implicit Aggression moderates the mediating effect of state negative affect, such that the indirect effects of situational strength on CWB are stronger among those with higher standing on Implicit Aggression.*

CHAPTER 2

METHOD

Ecological Momentary Assessment (EMA; also known as *experience sampling*) facilitates the study of otherwise inaccessible (e.g., in laboratory or clinical settings) within-person variability in constructs likely to show significant variability over relatively short timeframes (Beal & Weiss, 2003; Kahneman & Krueger, 2006; Schwartz & Stone, 1998; Shiffman, Stone, & Hufford, 2008). Specifically, by repeatedly assessing participants on the same variables many times across multiple days, EMA provides researchers with a means of examining how individuals' experiences vary over time. This feature is essential to the current research goal of elucidating the momentary mechanisms (e.g., affective states) through which person-situation interactions are expected to contribute to CWB (Bushman & Anderson, 2001; Dimotakis et al., 2008; Spector, 2011).

Participants

Participants were 82 (61 female, 21 male) working adults, recruited through print and digital media as well as word-of-mouth. No individual was permitted to participate in this research more than once. Eligible individuals were those who were at least 18 years of age, residing in the United States, and employed at least 30 hours per week. Participants ranged from 20 to 60 years of age (M= 36.9, SD=10.2), and were generally well educated (80.5 percent had at least some college education). The majority of participants (i.e., 68 percent) were individual contributors or non-supervisory personnel, 24 percent were employed in managerial or supervisory roles, and 7 percent were

executives within their respective organizations. The distribution of participants across industries was reported as shown in Table 1, while Table 2 summarizes the remaining data on participants' occupational status and history.

Table 1

Study Participants by Industry

Industry	Number of Participants	Percentage of Sample
Education	26	31.7%
Finance & Industry	11	13.4%
Healthcare/Social Assistance	9	11.0%
Professional & Business Services	8	9.8%
Other	8	9.8%
Government	6	7.3%
Manufacturing	5	6.1%
Information Technology	3	3.7%
Other Services	3	3.7%
Construction	1	1.2%
Leisure & Hospitality	1	1.2%
Trade, Transportation & Utilities	1	1.2%

Table 2

Participant Occupational History & Status

Characteristic	Mean	SD	Median	Minimum	Maximum
Total Full Time Jobs Held	4.7	3.1	4.0	1.0	17.0
Organizational Tenure (in years)	6.1	6.7	3.0	0.0	27.0
Role Tenure (in years)	4.1	4.4	3.0	0.0	27.0
Hours Worked Per Week	41.9	5.1	40.0	30.0	60.0

Measures

Background/Occupational Questionnaire

Participants were asked to report on their demographic characteristics, work history, and current occupation (see Appendix A for item text). Additionally, the Situational Strength at Work Scale (SSW) (α=.85; Meyer et al., 2014) was used to assess the typical levels of situational strength associated with participants' current jobs. The SSW assesses four facets of situational strength
(i.e., clarity, consistency, constraints, and consequences) as well as global situational strength. The measure is composed of 4, 7-item scales (one scale for each facet of situational strength). For each item, participants were asked to indicate their level of agreement with a statement about their work contexts in general (e.g., "*...specific information about work-related responsibilities was provided," "...I was prevented from making my own decisions"*). All items used a 1 to 7 (1=*Strongly Disagree*, 7=*Strongly Agree*) response scale.

Personality

The Narcissistic Personality Inventory (NPI) (α= .82; Raskin & Hall, 1981; Raskin & Terry, 1988; Raskln & Hall, 1979) was designed for use with subclinical populations, and measures trait Narcissism (i.e., as opposed to Narcissistic Personality Disorder). The measure is composed of 40 pairs of statements (e.g., "*I am going to be a great person"* versus "*I hope I am going to be successful"*). Each pair of statements is accompanied by instructions to choose the statement closest to the respondent's own feelings.

The Conditional Reasoning Test of Aggression (CRT-A) (α[1] = .66; James &

[1] Estimated based on James & LeBreton (2012) modification of formula 21 (Gulliksen, 1950).

McIntyre, 2004) is a 22-item measure of Implicit Aggression that assesses the extent to which justification mechanisms (JMs) guide respondents' reasoning. Each conditional reasoning item presents response options reflecting JMs employed by Aggressive individuals (AGs), logically incorrect alternatives, and pro-social alternatives to JMs (James et al., 2004). Six JMs are included in the CRT-A: Hostile Attribution Bias, Derogation of Target Bias, Retribution Bias, Victimization by Powerful Others Bias, Potency Bias, and Social Discounting Bias (James et al., 2004).

Trait Negative Affectivity was assessed using the corresponding 10-item subscale ($\alpha = .84$; of the Positive and Negative Affect Schedule-Expanded Form (PANAS-X) (Watson & Clark, 1999). This measure assesses affect via mood descriptors (e.g., *excited*, *afraid*) and is designed to be flexible enough for use with the previously described time-varied instructions (Watson, Clark, & Tellegen, 1988; Watson & Clark, 1999). For each descriptor, participants are asked to indicate how accurately, on average, the descriptor presented them. Each mood descriptor was presented alongside a 0 to 5 response scale where 0=*Very slightly or not at all* and 5=*Extremely*.

Table 3 summarizes participant scores on job-level situational strength and trait personality measures.

Table 3

Descriptive Statistics for Level 2 Variables

Variable	M	SD	Median	Min	Max	Skew	Kurtosis
Implicit Aggression	4.37	2.00	4.00	0.00	10.00	0.12	0.15
Job-Level Clarity	34.24	9.65	36.50	13.00	49.00	-0.38	-0.89
Job-Level Constraints	23.43	9.72	23.00	7.00	47.00	0.25	-0.54
Job-Level Consistency	32.16	10.01	33.00	7.00	49.00	-0.44	-0.50
Job-Level Consequences	31.45	8.55	31.50	13.00	49.00	0.01	-0.66
Trait Narcissism	14.55	6.32	14.00	1.00	28.00	0.25	-0.76
Trait Negative Affect	15.49	5.11	14.00	10.00	42.00	2.07	7.36

Table 4

Correlations Among Level 2 Variables

Variable	1	2	3	4	5	6	7
1. Implicit Aggression	1.00						
2. Job-Level Clarity	.07	1.00					
3. Job-Level Constraints	-.17	-.15	1.00				
4. Job-Level Consistency	.03	.57**	-.11	1.00			
5. Job-Level Consequences	-.07	.24*	.26*	.45**	1.00		
6. Trait Narcissism	.03	-.07	.27*	-.02	.19	1.00	
7. Trait Negative Affectivity	.01	-.20	.36**	-.27*	-.09	.31**	1.00

Note. *$p < .05$ (2-tailed), **$p < .01$ (2-tailed).

EMA Surveys

Participants were asked to complete an EMA survey each time they received a text message signal (the signal delivery is discussed in the *Procedure* section). Each EMA survey contained items regarding (a) work status, shift, and setting; (b) situational strength; (c) affective states; and (d) voluntary work behavior. All item text and

instructions used first-person tense, and included instructions or item stem modifications (e.g., "during the period since the last alert…") to consider the period since submitting the preceding EMA survey (or since the beginning of the workday if responding to the first signal of the day).

Based on validity evidence reported by Meyer et al. (2014), the best three items from each facet of the Situational Strength at Work Scale (SSW) appeared in the EMA survey (12 items total). Item stems were modified to reflect the interval and first-person foci of the ecological momentary assessment technique. That is, for each item, participants were asked to indicate their level of agreement with a statement about their work contexts during the period since the last alert.

The 10-item general dimension subscale of the Positive and Negative Affect Schedule-Expanded Form (PANAS-X) (Watson & Clark, 1999) was used to assess state negative affect. Instructions were modified to fit the momentary focus of EMA surveys. Specifically, were asked to indicate how accurately each descriptor presented described their mood during the period since the last alert. Finally, a 16-item measure, adapted for momentary use by Dalal, Lam, Weiss, Welch, and Hulin (2009), assessed voluntary work behavior by asking participants to indicate whether or not they engaged in specific behaviors (e.g., "*praised or encouraged someone"*, "*did not work to the best of my ability"*).

Table 5

Variability in Level 1 Variables

Variable	Variability Between Persons*	Variability Within Persons
State Negative Affect	36%	64%
CWB	37%	63%
Constraints	67%	33%
Consequences	68%	32%
Clarity	70%	30%
Consistency	75%	25%

Note. *Based on Intraclass Correlation Coefficient (ICC)

Procedure

Eligible volunteers completed an online orientation session during which they received information and instructions about study activities, and copies of important documents relevant to their participation in this research. During the orientation session, participants reviewed informed consent materials, and electronically indicated their willingness to proceed with study participation. Participants then used their personal computers or electronic tablets to complete the aforementioned personality measures and the background/occupational questionnaire via the Qualtrics online survey interface. Participants were subsequently provided with either loaner iPod Touch devices for responding to daily surveys, or instructions for configuring their personal handheld devices for entering responses. Participants provided their responses to EMA surveys through the iSurvey mobile data collection application.

For each of 10 consecutive business days, each participant received 5 quasi-randomly scheduled EMA survey signals per day. The signals were delivered to all participants via text messages sent to their personal cell phones. All signals were scheduled for delivery between 7:00 a.m. and 7:00 p.m. and were spaced at least 90 minutes apart. Participants were advised that valid EMA survey responses were those

begun within 30 minutes of each signal. At the start of each EMA survey, participants were reminded to respond to the items therein based on their experiences since the preceding EMA survey, or since the start of the workday if they were responding to the first signal of the day. At the conclusion of the 10-day EMA survey period, each participant completed an asynchronous, online debriefing session. Participants received to $170 for participating in the study, with compensation for EMA survey responses pro-rated based on the number of valid responses submitted (i.e., those begun within 30 minutes of receiving a survey alert).

Analytic Approach

Data from Ecological Momentary Assessment (EMA) studies have a hierarchical structure wherein EMA survey responses (Level 1) are nested within participants (Level 2) (Beal & Weiss, 2003; Stone et al., 1998). As depicted in Figure 1, two-levels of analysis were examined: Level 1 represented within-person responses (i.e., responses to EMA surveys), while Level 2 units represented the relatively stable characteristics of participants and those of their typical work environments (i.e., personality traits and job-level situational strength). The hypothesized model of the counterproductive work behavior (CWB) process was based on the proposition that state negative affect would mediate within-person situational strength-CWB relationships, but that these mediation effects would be moderated by personality (i.e., Implicit Aggression and trait Narcissism). Thus, in each set of analyses, (a) situational strength facets were treated as independent variables, (b) state negative affect was examined as a mediator, and (c) personality was examined as a moderating influence on mediation effects.

Multilevel structural equation modeling (MSEM), as described by Preacher,

Zyphur, and Zhang (2010), was used to simultaneously estimate and evaluate the hypothesized relationships. This approach is superior to other common approaches (e.g., hierarchical linear modeling) to examining mediation in hierarchical data which often conflate between- and within-level effects, and subsequently yield biased estimates of mediator-criterion relationships and of indirect effects (Preacher, Zhang, & Zyphur, 2011; Preacher et al., 2010). For all relationships examined herein, Mplus version 7[2] was used to specify and fit multilevel mediation models as special cases of a general MSEM model. Therein, both between and within models were fitted, with indirect effects computed and evaluated for each model (i.e., both between and within models). "In MSEM all Level-1 variables are subjected to implicit, model-based group mean centering by default" (Preacher et al., 2010, p. 210). Thus, variables were not centered prior to entry into the Mplus application.

The Preacher, Zyphur, and Zhang (2010) procedure and code has not been extended to the case of moderated lower level mediation. Thus, the influence of personality was examined through the fitting of lower level mediation models to cases grouped on the basis of *high* and *low* standing on the hypothesized moderators (i.e., Implicit Aggression and trait Narcissism). The aforementioned *high* and *low* groupings were created through artificial dichotomization of the continuous personality variables via a median split[3]. Where indirect effects were both (i.e., for *high* and *low*

[2] Code included in supplement, accessible at http://dx.doi.org/10.1037/a0020141.supp, to Preacher, Zyphur & Zhang (2010)

[3] The split for Implicit Aggression occurred at 4, while the split for trait Narcissism was made at 14. While making the split for Implicit Aggression at 8 (i.e., the assessment developer's threshold for a *high* score) may have been more theoretically meaningful, this would have reduced the *high* analysis group to a size inadequate for MSEM analysis (i.e., n=4).

groups) significant within the same predictor-moderator combination, chi-square tests were to be used to determine whether differences in the indirect effects across the examined levels of the personality moderators were significant.

CHAPTER 3

RESULTS

Herein, two types of models were fitted to the current data: (1) lower level mediation models which tested only the Level 1 relationships depicted in Figure 1; and (2) moderated mediation models in which all relationships depicted in Figure 1 were examined. Given that they were not based on expected influences of Implicit Aggression or trait Narcissism, Hypotheses 1 and 2 were examined in the lower level mediation models, while the remaining hypotheses were tested via moderated mediation models. In the interest of completeness, however, findings for all major relationships (i.e., direct and indirect effects) involved in both types of models are reported herein. In the subsections that follow, (a) incidental findings are explicitly differentiated from those directly related hypotheses under study; (b) findings from lower level mediation models precede those associated with moderated mediation models; and (c) findings are discussed in the order that model parameters appear (i.e., *a*, *b*, *c'*, then indirect effects).

Table 6 provides a summary of all hypothesis test outcomes (i.e., supported or not supported) reported herein.

Table 6

Hypothesis Test Outcomes

	Hypothesis	Outcome
1.	Situational strength facets show significant within-person variability.	Supported
2.	State negative affect is positively associated with CWB.	Supported
3a.	Among those high on trait Narcissism, constraints are positively associated with state negative affect.	Supported
3b.	Among those high on trait Narcissism, consequences are positively associated with state negative affect.	Not Supported
3c.	Among those high on trait Narcissism, clarity is positively associated with state negative affect.	Not Supported
3d.	Among those high on trait Narcissism, consistency is positively associated with state negative affect.	Not Supported
4.	Trait Narcissism moderates the mediating effect of state negative affect, such that the indirect effects of situational strength facets on CWB are stronger among those with higher standing on trait Narcissism.	Not Supported
5a.	Among those high on Implicit Aggression, constraints are positively associated with state negative affect.	Supported
5b.	Among those high on Implicit Aggression, consequences are positively associated with state negative affect	Not Supported
5c.	Among those high on Implicit Aggression, clarity is negatively associated with state negative affect.	Not Supported
5d.	Among those high on Implicit Aggression, consistency is negatively associated with state negative affect	Not Supported
6.	Implicit Aggression moderates the mediating effect of state negative affect, such that the indirect effects of situational strength on CWB are stronger among those with higher standing on Implicit Aggression.	Partially Supported

Within-Person Variability in Situational Strength

In support of Hypothesis 1, intraclass correlation coefficients (ICCs) indicated that nontrivial portions of the variability in perceived situational strength was within-persons. Moreover, chi-square tests indicated that within-person variability in each facet of situational strength was significant. These findings suggest that individual experiences and interpretations of work situations, and of their interactions therein, vary

in meaningful ways throughout and across workdays.

Table 7

Within-Person Variability in Facet-Level Situational Strength

Situational Strength Facet	χ^2	**df**	p
Constraints	2391.028	79	0.000
Consequences	1074.010	81	0.000
Clarity	1865.551	80	0.000
Consistency	2223.841	77	0.000

Situational Strength in the CWB Process

Fitting of lower level mediation models revealed that, on average, perceived constraints and perceived consequences were positively associated with state negative affect, while perceived consistency and clarity were negatively associated with state negative affect (the a-parameter estimates in Table 8). This finding indicates that individuals tend to experience negative feelings when they perceive attempts to restrict their behavior, perceive that substantial consequences would likely result from their behavior, or believe that relevant behavioral information is of questionable or low quality (i.e., ambiguous or inconsistent). As such, this finding establishes a relationship between momentary perceptions of situational strength and negative affective states. That being said, there was also evidence that this effect differed between individuals for consequences, $V(a_j) = 0.063$, $p = .008$, and for clarity, $V(a_j) = 0.028$, $p = 0.030$, thereby suggesting that individuals differed in their level of sensitivity to clarity and consequences; a proposition consistent with the earlier assertions of Spector (2011) regarding individual variation the influence of environmental sensitivity on individual propensity toward negative affective reactions.

Table 8

Direct Effect Estimates for Lower Level Mediation Models

Effect	Estimate	SE	p-value	95% CI
Constraints				
a	0.271	0.058	0.000	[0.156, 0.385]
b	0.058	0.017	0.001	[0.025, 0.092]
c'	0.019	0.014	0.154	[-0.007, 0.046]
Consequences				
a	0.081	0.040	0.041	[0.003, 0.160]
b	0.068	0.017	0.000	[0.036, 0.101]
c'	-0.014	0.010	0.158	[-0.034, 0.006]
Clarity				
a	-0.068	0.033	0.039	[-0.132, -0.003]
b	0.060	0.016	0.000	[0.028, 0.092]
c'	-0.003	0.011	0.774	[-0.024, 0.018]
Consistency				
a	-0.148	0.061	0.016	[-0.268, -0.028]
b	0.067	0.022	0.002	[0.024, 0.110]
c'	-0.013	0.011	0.263	[-0.035, 0.009]

Tests of situational strength-state negative affect relationships (the a-parameter estimates in Table 9 - Table 12) in moderated mediation models yielded findings different from those in lower level mediation models. On average, perceived constraints were positively associated with state negative affect across all models fitted. Consequences were positively associated with state negative affect only among those low

on aggression. Across all models, neither clarity nor consistency was significantly associated with state negative affect. Thus, Hypotheses 3a and 5a were supported[4], while Hypotheses 3b – 3d and Hypotheses 5b – 5d were unsupported.

Table 9

Direct Effect Estimates for Moderated Mediation Models (Low Aggression)

Effect	Estimate	SE	p-value	95% CI
Constraints				
a	0.400	0.154	0.009	[0.099, 0.702]
b	0.055	0.019	0.005	[0.017, 0.092]
c'	-0.001	0.025	0.982	[-0.05, 0.049]
Consequences				
a	0.135	0.057	0.017	[0.024, 0.246]
b	0.085	0.023	0.000	[0.039, 0.131]
c'	-0.007	0.015	0.646	[-0.036, 0.022]
Clarity				
a	-0.101	0.071	0.150	[-0.24, 0.037]
b	0.061	0.024	0.010	[0.014, 0.108]
c'	-0.012	0.022	0.589	[-0.056, 0.032]
Consistency				
a	-0.169	0.181	0.352	[-0.523, 0.186]
b	0.067	0.023	0.003	[0.022, 0.112]
c'	-0.011	0.019	0.575	[-0.048, 0.027]

[4] While results relevant to Hypotheses 3a and 5a technically supported the hypotheses herein, it should be noted that significant positive relationships between constraints and state negative affect were found among those in both *high* and *low* groups for each proposed personality moderator, suggesting that the constraints-state negative affect relationships observed are not necessarily a function of one's standing on Implicit Aggression or trait Narcissism.

Table 10

Direct Effect Estimates for Moderated Mediation Models (High Aggression)

Effect	Estimate	SE	p-value	95% CI
Constraints				
a	0.202	0.058	0.001	[0.088, 0.316]
b	0.065	0.036	0.071	[-0.006, 0.136]
c'	0.026	0.016	0.092	[-0.004, 0.057]
Consequences				
a	0.021	0.044	0.630	[-0.065, 0.107]
b	0.073	0.037	0.048	[0.001, 0.146]
c'	-0.028	0.025	0.262	[-0.077, 0.021]
Clarity				
a	-0.004	0.064	0.952	[-0.130, 0.122]
b	0.074	0.062	0.231	[-0.047, 0.195]
c'	-0.005	0.020	0.791	[-0.045, 0.034]
Consistency				
a	-0.114	0.785	0.884	[-1.653, 1.424]
b	0.062	0.300	0.835	[-0.525, 0.650]
c'	-0.015	0.054	0.775	[-0.121, 0.090]

Table 11

Direct Effect Estimates for Moderated Mediation Models (Low Narcissism)

Effect	Estimate	SE	p-value	95% CI
Constraints				
a	0.192	0.076	0.011	[0.044, 0.340]
b	0.060	0.059	0.311	[-0.056, 0.177]
c'	0.031	0.021	0.143	[-0.011, 0.073]
Consequences				
a	0.074	0.075	0.321	[-0.073, 0.222]
b	0.076	0.093	0.415	[-0.107, 0.259]
c'	0.006	0.122	0.958	[-0.233, 0.246]
Clarity				
a	-0.044	0.032	0.167	[-0.107, 0.019]
b	0.067	0.090	0.459	[-0.110, 0.244]
c'	-0.012	0.047	0.794	[-0.105, 0.081]
Consistency				
a	-0.148	0.138	0.282	[-0.418, 0.122]
b	0.051	0.080	0.527	[-0.107, 0.208]
c'	-0.025	0.023	0.291	[-0.070, 0.021]

Table 12

Direct Effect Estimates for Moderated Mediation Models (High Narcissism)

Effect	Estimate	SE	p-value	95% CI
Constraints				
a	0.377	0.170	0.026	[0.045, 0.709]
b	0.059	0.092	0.524	[-0.122, 0.240]
c'	0.000	0.118	0.999	[-0.230, 0.230]
Consequences				
a	0.092	0.060	0.125	[-0.026, 0.210]
b	0.076	0.021	0.000	[0.035, 0.117]
c'	-0.028	0.017	0.102	[-0.061, 0.006]
Clarity				
a	-0.074	0.056	0.183	[-0.184, 0.035]
b	0.059	0.021	0.005	[0.018, 0.100]
c'	-0.002	0.023	0.940	[-0.046, 0.043]
Consistency				
a	-0.130	0.273	0.634	[-0.665, 0.406]
b	0.069	0.078	0.374	[-0.083, 0.221]
c'	-0.007	0.116	0.951	[-0.234, 0.219]

These findings establish relationships between momentary perceptions of situational strength (i.e., constraints and consequences) and negative affective states for some individuals. Specifically, findings from the moderated-mediation models indicate that (a) individuals generally tend to experience negative feelings when they perceive attempts to restrict their behavior; and (b) that individuals with low standing on

aggression have negative affective reactions to perceptions that substantial consequences would likely result from their behavior. It is important to note that there was also evidence that the aforementioned significant effects noted above varied significantly between individuals, thereby suggesting that individuals differed in their level of sensitivity to constraints and consequences. This proposition is also consistent with the earlier assertions of Spector (2011) regarding individual variation in the influence of environmental sensitivity on individual propensity toward negative affective reactions.

State Negative Affect in the CWB Process

In support of Hypothesis 2, and regardless of which situational strength facet was included as a predictor, state negative affect was positively associated with CWB in all lower level mediation models examined herein (the b-parameter estimates in Table 8). This finding is consistent with that of earlier examinations of affect-CWB relationships, and suggests that when individuals experience negative affect in the workplace, they are more likely to engage in CWB. These findings also indicate that the relationship between negative affective states and CWB may differ between individuals depending on the situational strength facet under study. Specifically, a significant amount of variability existed in the relationship between state negative affect and CWB between individuals for the lower level mediation models featuring consequences $V(b_j) = 0.006$, $p = 0.011$, clarity $V(b_j) = 0.005$, $p = 0.020$, and consistency $V(b_j) = 0.006$, $p = 0.019$, suggesting that the likelihood that negative affective states leads to CWB depends upon the type of environmental stimulus to which an individual is responding.

Tests of the relationship between state negative affect and CWB in the moderated mediation context (the b-parameter estimates in Table 9 - Table 12) produced mixed

results. Specifically, state negative affect was positively related to CWB (a) among individuals low on aggression across all facets of situational strength, (b) among individuals high on aggression in the consequences model, and (c) in the consequences and clarity models for individuals high on trait narcissism. The significant findings for this relationship are consistent with those from earlier examinations of affect-CWB relationships, and suggest that when some individuals experience negative affective states in the workplace, they are more likely to engage in CWB. These findings also indicate that the relationship between negative affective states and CWB may differ depending upon individuals' standing on Implicit Aggression or trait Narcissism, and/or the particular situational strength facet under study. Thus, the likelihood of negative affective states leading to CWB is appreciably influenced by both personality and by the type of environmental stimulus to which an individual is responding. Moreover, this finding also supports Spector's (2011) assertion that the relationship between negative affect and CWB is likely influenced by third variables (e.g., effortful control, locus of control, aggression).

Personality & Indirect Effects of Situational Strength in the CWB Process

No evidence of significant indirect effects[5] of perceived consequences, clarity, or consistency on CWB through state negative affect was found in lower level mediation models. For perceived constraints, however, a formal test revealed a significant indirect effect of perceived constraints on counterproductive work behavior through state negative affect, 0.011, $Z = 2.176$, $p = .030$, 95% CI [0.001, 0.020]. This finding suggests that

[5] In 1-1-1 mediation models (i.e., those where predictor, mediator, and criterion are all measured at Level 1), within relationships are the primary foci. Thus, subsequent discussion of indirect effects will focus on within indirect effects, which are estimated by adding the product of the *a* and *b* paths with the covariance of the random a_j and b_j paths to, when describing findings relevant to hypothesized mediation relationships.

perceptions of constraints affect CWB through their influence on state negative affect. That is, a significant effect of perceived constraints on CWB is transmitted through negative affective states.

Table 13

Indirect Effect Estimates and Test Results for Lower Level Mediation Models

Effect	Estimate	SE	p-value	95% CI
Constraints	0.011	0.005	.030	[0.001, 0.020]
Consequences	0.000	0.005	.958	[-0.009, 0.010]
Clarity	0.002	0.003	.516	[-0.004, 0.008]
Consistency	-0.003	0.006	.590	[-0.014, 0.008]

Models fitted to examine moderated mediation revealed no evidence of significant indirect effects of perceived situational strength on CWB through state negative affect in either of the trait Narcissism models examined. Thus, Hypotheses 4 was not supported. Among those high on aggression, however, results revealed evidence of a significant indirect effect of perceived constraints on CWB through state negative affect, 0.014, Z=3.018, p = .003, 95% CI [0.005, 0.024]. This indirect effect was not significant when the same model was fit to data from the low aggression group[6]. Offering partial support for Hypotheses 6, this finding suggests that Implicit Aggression may significantly influence the mediation relationship through which the effects of perceived constraints on CWB are transmitted through state negative affect. Specifically, among those with higher standing on Implicit Aggression, perceptions of high levels of constraints may promote undesirable behavior by inducing negative affective states, which subsequently lead to CWB.

[6] The within-level indirect effect for the low aggression group failed to reach statistical significance despite being larger in magnitude than the estimated indirect effect for the high aggression group. This pattern is likely a function of the small standard error associated with the estimate for the high aggression group. Moreover, this finding is not unexpected considering the differences between the low and high aggression group in terms of the distribution of between- and within-person variability (i.e., most of the variability in state negative affect and CWB was within-person for the high aggression group, but between-person in the low aggression group).

Table 14 and **Error! Reference source not found.**Table 15 summarize the indirect effect estimation and test results from the moderated mediation models used to examine the hypothesized influences of Implicit Aggression and trait Narcissism, respectively, on lower level mediation relationships.

Table 14

Indirect Effect Estimates & Test Results for Moderated Mediation Models (Aggression)

Effect	Estimate	SE	p-value	95% CI
Constraints				
High Aggression	0.014	0.005	.003	[0.005, 0.024]
Low Aggression	0.019	0.018	.275	[-0.016, 0.055]
Consequences				
High Aggression	0.000	0.030	.993	[-0.058,0.058]
Low Aggression	0.005	0.007	.514	[-0.009, 0.019]
Clarity				
High Aggression	0.010	0.007	.121	[-0.003, 0.023]
Low Aggression	-0.002	0.005	.663	[-0.013, 0.008]
Consistency				
High Aggression	0.006	0.027	.818	[-0.047, 0.060]
Low Aggression	-0.008	0.008	.285	[-0.023, 0.007]

Table 15

Indirect Effect Estimates & Test Results for Moderated Mediation Models (Narcissism)

Effect	Estimate	SE	p-value	95% CI
Constraints				
High Narcissism	0.014	0.115	.904	[-0.211, 0.239]
Low Narcissism	0.010	0.009	.270	[-0.007, 0.027]
Consequences				
High Narcissism	0.002	0.008	.803	[-0.014, 0.018]
Low Narcissism	-0.001	0.012	.953	[-0.023, 0.022]
Clarity				
High Narcissism	0.005	0.007	.435	[-0.008, 0.019]
Low Narcissism	0.001	0.004	.775	[-0.007, 0.009]
Consistency				
High Narcissism	0.001	0.020	.965	[-0.039, 0.041]
Low Narcissism	-0.005	0.008	.559	[-0.020, 0.011]

CHAPTER 4

DISCUSSION

The findings herein elucidated patterns of variability in individual perceptions of situational strength. Herein, individual perceptions of situational strength varied between- and within-persons. This suggests that not only do different individuals experience different situations in their respective workplaces, but also that there is significant within-person variability in those experiences throughout and across workdays and workweeks. The distribution of variability in reported perceptions of situational strength suggested that the majority of variability in such perceptions was between-persons. Since the individuals in this sample were not from the same organization, occupation, or industry, this finding could be a function of role-, occupation-, or organization-level differences in the content and quality of situational information encountered in one's workplace. It is also possible that between-person variables (e.g., personality) influence the amount of within-person variability in perceptions of situations such that a given individual interprets different situations in similar ways. For example, a person whose individual differences profile makes them sensitive to efforts to reduce their autonomy might attend more to information conveying constraints, or interpret relevant cues more strongly than a colleague with a different individual differences profile.

The current findings also established perceptions of situational strength as an important influence on affective experiences in the workplace. More specifically, each facet of situational strength was significantly related to state negative affect. In lower

level mediation models, constraints and consequences were positively associated with momentary levels of negative affect, while clarity and consistency had negative associations with negative affective states. When the respective influences of Implicit Aggression and trait Narcissism were considered (i.e., moderated mediation models), results revealed evidence of significant relationships between constraints and negative affect for all individuals, and between consequences and negative affect among those with lower standing on Implicit Aggression. Considered together, current findings around the relationship between perceived situational strength and state negative affect suggest that individuals are cognizant of, and responsive to, variations in situational cues and contextual information in ways that promote negative affective responses.

These findings could be interpreted as evidence that individuals have negative affective reactions to perceived efforts to manipulate their behavior. While all situational strength facet-state negative affect relationships were significant in the lower level mediation models, only the constraints facet was significantly associated with state negative affect across all moderated mediation models. These results are consistent with earlier findings (e.g., Reis, Sheldon, Gable, Roscoe, & Ryan, 2000; Sheldon, Ryan, & Reis, 1996) documenting negative relationships between autonomy and negative affect. Specifically, the constraints-negative affect relationship evident herein might have been attributable to negative reactions to perceptions of lower or limited autonomy.

As previously mentioned, consequences, which was the only other situational strength facet significantly associated with state negative affect in any moderated mediation model, was associated with state negative affect only among those low on Implicit Aggression. This pattern of findings may be related to stress associated with

high-stakes decision or action requirements. Earlier research documenting stressor-emotion relationships in work contexts (Spector & Fox, 2002, e.g., 2005) supports this proposition. That is, for some people, high impact decisions may function as stressors, prompting negative affective reactions. Notably, those high on aggression did not report negative affective reactions to higher levels of consequences. This pattern of findings may be explained in part by aggressive individuals' relatively higher levels of preparedness to justify their actions and decisions. That is, while non-aggressive individuals may become stressed or anxious when faced with high-stakes situations, more aggressive individuals may experience less stress in such situations because they are highly prepared to justify their actions, and not apprehensive about potentially negative or harmful outcomes thereof (James et al., 2004). These findings suggest that the relationship between perceptions of situational strength and negative affective reactions varies according to both the facet of situational strength individuals are appraising, and individual sensitivity (determined in part by personality traits) to that particular type of situational stimulus.

While the relationship between negative affect and CWB is fairly well established, the current analytical approach separated the between- and within-person variability therein. In disentangling the component effects of the negative affect-CWB relationship, this approach facilitated examination of within-person processes, which have largely been ignored in earlier, cross-sectional research. Moreover, the finding of significant within-person variability in the negative affect-CWB relationship provides empirical support for a critical proposition of most contemporary process-based theoretical models of this important workplace behavior.

As with the situational strength-state negative affect relationship, findings regarding the state negative affect-CWB relationship differed between the mediation only and moderated mediation models in potentially meaningful ways. Specifically, the universally positive, significant state negative affect-CWB association observed in lower level mediation models did not hold across all moderated mediation models. While the pattern of findings for the low aggression group were similar to those in the lower level mediation models (i.e., state-negative affect was positively associated with CWB under models for all facets of situational strength), this same relationship was significant only for the consequences model in the high aggression group, and only for consequences and clarity within the high Narcissism group. These results suggest that, as with the situational strength-state negative affect relationship, the relationship between negative affective states and CWB varies based on both the type of contextual stimulus to which individuals are responding, and individual sensitivity thereto.

In a notable exception to the outcomes of moderated mediation examinations in the current study, the current results revealed a significant indirect effect of constraints on CWB through state negative affect. It is important to note here that the absence of a significant direct effect of constraints on counterproductive work behavior, (c' parameters in Table 8 and Table 9 - Table 12) suggests that state negative affect is likely the primary means through which constraints affect CWB. Evidence of moderated mediation relevant to this relationship was found only among those high on Implicit Aggression. That is, among more aggressive individuals higher levels of constraints prompted negative affective reactions, which subsequently led to counterproductive work behavior.

As previously mentioned, implicitly aggressive individuals are predisposed toward negative interpretations of contextual information and of interactions with others, generally more likely to experience negative affective reactions, and more likely to engage in CWB. Hence, the indirect effect findings herein illustrated that such predispositions may have particularly undesirable effects on the within-person processes underlying voluntary work behavior. Moreover, this finding suggests that individuals with higher standing on Implicit Aggression may be particularly sensitive to the imposition of constraints in the workplace.

Implications for Research & Theory

While much of the variability in facet-level situational strength was between-persons, the presence of significant within-person variability therein suggests that situational strength is a complex phenomenon, with an important momentary component. Future theory and research design should reflect careful consideration of this finding. Ignoring within-person variability in perceptions of situational strength, and/or failing to examine that variability at the facet-level, may lead to erroneous conclusions about individuals' work experiences, as well as their perceptions and appraisals thereof.

Current evidence regarding the influence of situational strength on negative affective states suggests that it is important to include affective variables in relevant models, particularly those that include situational strength as a predictor. Similarly, future researchers may find it useful to assess, monitor, and/or control for, affective reactions to manipulations of contextual information in studies of voluntary work behavior (Dwyer & Ganster, 1991; Spector, Zapf, Chen, & Frese, 2000). Ignoring the influence of affective states in such settings could result in problematic conclusions about the origins of

individual behavior at work.

As the results herein suggested, much of the variability in counterproductive work behavior (CWB) is within-person. Similarly, more than half of the variability in state negative affect, which contributes to CWB, is also within-person. Thus, data collection or analysis approaches that did not facilitate simultaneous examination of both between- and within- components of mechanisms underlying CWB could have obscured or mischaracterized important effects and relationships operating at the within-person level (Preacher et al., 2011, 2010). The current study demonstrated the utility of two relatively recent advancements, ecological momentary assessment (EMA) and multilevel structural equation modeling (MSEM), without which the current exploration of CWB (i.e., as the outcome of complex, interrelated within- and between-person processes in which situational perceptions, and affective responses thereto, influence the identification and selection of behavioral alternatives) would not have been possible. Future researchers wishing to explore similarly nuanced and/or process-based phenomena should seriously consider incorporating these or similar methods in their own research.

Practical Implications

In the current study, individuals reported higher levels of state negative affect when they perceived (a) information as unclear or ambiguous or (b) stronger attempts to manipulate their behavior (i.e., via high constraints or consequences). These findings have important implications for the design, content, and delivery of communication around organizational policies and procedures, and changes. Specifically, organizations hoping to mitigate the risk of negative affective experiences, and the deleterious consequences of subsequent counterproductive work behavior should strive to achieve

their goals under policies that maximize individual autonomy and discretion. Where it is imperative to limit individual freedoms in going about their work, information about these limitations and underlying reasons, should be communicated via messaging that is (a) clear; (b) does not vary substantively across information sources (e.g., supervisor, coworkers, and organizational policies should all offer similar guidance about behavior); and (c) emphasizes valued outcomes for employees rather than penalties for non-compliance or error.

For example, using plain language (as opposed to jargon) and direct statements would enhance the clarity of messaging and could thus mitigate the risk of negative affective responses to perceived ambiguity. Similarly, aiming interventions (e.g., training, workshops) at ensuring that all employees receive important policy information directly, and have opportunities to seek clarification where needed would reduce employees' need to seek information from multiple sources, and by extension the likelihood of employees encountering inconsistent and/or inaccurate information. These communications should focus primarily how compliance will benefit the individual and/or organization, as opposed to emphasizing negative outcomes (particularly individual penalties) associated with non-compliance. Finally, when penalties must be applied, organizations and managers should take great care to ensure that such application is consistent throughout the organization. Such efforts will minimize the potential for perceptions of ambiguity or inconsistency about the consequences of malperformance.

Limitations

This research was affected by several limitations associated with construct assessment/inclusion and the analytical procedures employed herein. To varying degrees, these limitations have the potential to negatively affect the overall generalizability of the findings described herein. Perhaps most obvious among these limitations is the reliance on self-report in assessments of situational perceptions and subsequent behavior. In addition to potential bias due to social desirability in responding, the accuracy of self-report data is often questioned on the basis of potential memory bias. However, it is reasonable to argue that the procedures employed herein both minimize response bias due to memory (i.e., by collecting data *in* situ; Beal & Weiss, 2003), and represent an appropriate means of collecting perceptual, affective, and performance data, particularly when response confidentiality is assured, and researchers are not affiliated with respondents' employing organization (Meyer et al., 2014; Penney & Spector, 2005; Spector, 1994). Moreover, given the poor performance of objective and peer measures of deviance (Penney & Spector, 2005; Sackett, Burris, & Callahan, 1989), and limited capacity of supervisors to observe the full range of employee behavior (Dalal, 2005; Sackett et al., 2006; Spector & Fox, 2002), self-reports may have been the most viable and accurate means of assessing CWB in the current study (Meyer et al., 2014).

Also relevant to assessment of constructs herein are potential limitations of the Situational Strength at Work Scale (SSW). More specifically, the extent to which the SSW accurately represents individuals' perceptions of work situations, and of interactions therein, may be limited by item content and phrasing. Approximately half to the SSW items focus on influence more likely to be exerted by a superior than by a lateral

colleague (i.e., top-down rather than normative/informal). For example, "very serious consequences occur when an employee makes an error," and "an employee is prevented from choosing how to do things" refer to levels of influence over a given employee that a supervisor would have, but that colleagues of equal or lesser rank would be unlikely to wield.

Earlier research on situational strength and counterproductive work behavior suggests that measures of situational perceptions should incorporate both formal and normative sources of situational information (e.g., Smithikrai, 2008). Thus, employing a measure that did not incorporate such influences may have resulted in information loss. For example, in addition to inquiring about the quality (i.e., clarity and consistency) or content (i.e., constraints and consequences) of contextual information, it would be useful to collect data on whether employees typically comply with information provided about work-related responsibilities and/or about the extent to which deviations from such expectations are punished (or not). This type of information would provide a more complete picture how employees perceive contextual information and their subsequent identification of, and selection among, behavioral alternatives. Consider, for example, a scenario in which an individual perceives clear, consistent information about what tasks he or she is expected to complete, but also reports that deviations from those expectations are routinely ignored in his/her organization, that individual might be less likely to comply with official expectations as well.

The phrasing of items in the *consequences* scale of the SSW may also have introduced measurement error or confounds. Specifically, this facet scale focuses on the *magnitude* of consequences, and does not explicitly incorporate positive or negative

valence. Thus individuals are left to their own devices to determine whether phrasing such as "important consequences" referred specifically to positive or negative outcomes, or more generally to any outcome at all. Such ambiguity may have reduced accuracy in reports of individuals' experiences of consequences. For example, if an individual associated only negative connotations with the word *consequences*, they would likely consider only negative outcomes in responding to consequence scale items resulting in an inaccurate report of the *magnitude* of consequences, which is the primary focus of this scale. In such a scenario, a researcher would unknowingly be incorrect in interpreting the *consequences* score as intended.

The remaining substantive limitations of the current research are associated with the inclusion and analysis of low base-rate, non-normally distributed personality variables as potential moderators of hypothesized lower level mediation effects. First, there is general consensus that Implicit Aggression and trait Narcissism are low base rate phenomena with non-normal distributions of scores on commonly used assessments thereof (James & LeBreton, 2012; Twenge, Konrath, Foster, Campbell, & Bushman, 2008). The current data was consistent with these expectations; with very few individuals in this sample earning CRT-A scores that would classify them as high on aggression according to the test's developers (James et al., 2004). The distribution of trait Narcissism in the sample was a bit more promising in terms of having a substantial range of scores on the NPI-40. However, few individuals in this sample scored higher than either the generally accepted mean for the NPI-40 or the higher means observed in more recent samples completing the measure (see Twenge et al., 2008 for a review and examination of generational increases in mean NPI-40 scores). Thus, restriction of range for both

CRT-A and NPI scores in the current sample may have affected the findings herein in unpredictable ways.

The need to artificially dichotomize Implicit Aggression and trait Narcissism to create *low* and *high* scoring groups may also represent a limitation of the current research. In addition to commonly cited potential problems with the controversial practice of applying median splits to continuous moderators (e.g., information loss, power reduction; see Whisman & McClelland, 2005 for a review), the median splits in this study were such that they created groups that may have been conceptually incongruent with the desired examinations. The split for Implicit Aggression occurred at 4, which is below the CRT-A developers' threshold of 8 (out of a possible 22) for designating an individual as aggressive. The split for trait Narcissism was made at an NPI-40 score of 14, which is below documented meta-analytic means (i.e., 15.06 in 1982 and 17.29 in 2006) for the measure (Twenge et al., 2008). This means that the *low* and *high* designations applied herein for trait Narcissism may not accurately differentiate between those with low and high standing on the NPI, and may thus not provide an optimal basis for examining the potential effects of trait Narcissism on the lower level mediation relationship under study herein.

Future Directions

The current findings suggest several potentially fruitful avenues of future research. Perhaps most notable among these is the empirical examination of multiple potential explanations for findings around the distribution of variability (i.e., between- versus within-person) in perceived situational strength. As previously mentioned, momentary variability in employees' work environments, and in employees' interpretations thereof,

were expected to give rise to substantial within-person variability in perceived situational strength. While the results herein did show evidence of such momentary variability, the level thereof was lower than expected.

Among the alternative explanations for this finding were (a) sample organization, role, or industry heterogeneity; (b) the effects of individual differences on situational perceptions; and (c) low-variability in employee experiences. Future research efforts might better elucidate the nature and origins of perceived situational strength by directly examining the influences of organization or occupation characteristics or types, individual differences, and employees' qualitative descriptions of their work experiences on the distribution of variability (i.e., between versus within-person) in perceived situational strength. Moreover, merely attempting to replicate the current findings on a sample of individuals from the same or very similar organizations, occupations, or industries, or within a controlled setting, would also help enhance understanding of variability in individuals' perceptions of situational strength at work.

Personality traits have long been characterized primarily in terms of their *relative stability*. Indeed, the current research used that attribute as a partial justification for the expectation of momentary variability in perceptions of situational strength. However, personality traits, and their behavioral manifestations, do show meaningful momentary variability (Beckmann, Minbashian, & Wood, 2011; Judge, Simon, Hurst, & Kelley, 2014; Minbashian, Wood, & Beckmann, 2010). It is plausible that such variability influences that observed in within-person CWB, reducing the aforementioned explanatory need for a third variable demonstrating substantial momentary variability. Thus, relevant theory could benefit from examinations of the momentary effects of

personality (e.g., task-contingent conscientiousness; Minbashian et al., 2010) within models examining the mechanisms underlying voluntary work behavior. The resulting findings could help elucidate potential within-person mechanisms by which the momentary expression of personality influences or interacts with situational perceptions to influence affective experiences and/or voluntary behavior at work.

Contemporary theoretical process models of counterproductive work behavior (e.g., Spector, 2011) posit important roles for additional person and situation variables in ways that would necessitate consideration of multiple moderator and/or multiple mediator models. The presence of within-person variability in many of the variables involved in such models suggests that the best analytical procedures for examining these models will be those that facilitate more complete separation of between and within components of included effects/relationships. Multilevel structural equation modeling (MSEM) offers the required separation, and is flexible enough to accommodate complex models like those theorized for CWB (Preacher et al., 2011, 2010).

Unfortunately, however, MSEM procedures are currently limited by their untapped potential capacity to incorporate variables in a variety of roles (e.g., moderator, mediator) at various levels. For example, the capacity to include a continuous (rather than artificially-dichotomized) moderator at level 2 would have facilitated an improved examination of the moderated mediation models hypothesized herein. Consequently, efforts to extend the current MSEM procedure to accommodate this and other more complex model structures[7] would better equip future researchers to fit and evaluate models that more closely reflect our current understanding of voluntary work behavior.

[7] Preacher, Zyphur, & Zhang (2010) offer useful guidance in this regard.

Conclusion

In this research, ecological momentary assessment (EMA) and multilevel structural equation modeling (MSEM) were used together to explore the person-situation interactions theoretically involved in the complex psychological mechanisms underlying counterproductive work behavior (CWB) (Meyer et al., 2014; Spector, 2011). This research made novel contributions to several earlier, largely cross-sectional literatures by simultaneously examining between-and within-person variability in perceptions of situational strength, negative affective states, and counterproductive work behavior within an MSEM framework. The findings herein support the proposition that efforts to influence employee behavior, via contextual information (e.g., policies, procedures, warnings), may have unintended negative affective and behavioral consequences.

Individuals' experiences and perceptions of situational strength vary, both between- and within-persons. That variability influences negative affective states such that high levels of constraints and consequences, and low levels of clarity and consistency, are associated with negative affective reactions. In sum, these findings suggest that counterproductive work behavior is not simply an inevitable behavioral product of predispositions alone. Rather, it seems this important category of workplace behavior is likely the product of complex interrelationships among multiple between- and within-person processes. Consequently, the current findings highlight the potential explanatory value of dynamic, multilevel approaches in the conceptualization and study of situational perceptions, affective experiences, and voluntary behavior in contemporary organizations.

APPENDIX A

PARTICIPANT BACKGROUND QUESTIONNAIRE

What is your gender?
- Female
- Male

What is your age?

What is your current marital status?
- Single
- Married
- Divorced or Separated
- Widowed
- With a Partner

What is the highest level of education that you have completed?
- Grade School
- High School
- Junior College
- Technical School
- College
- Post-graduate

Please select the option that best describes your ethnicity.
- White (Non-Hispanic)
- African-American/Black (Non-Hispanic)
- Hispanic (Non-White)
- Asian or Pacific Islander
- Native American
- 2 or More Ethnic Groups
- Other

How many full-time jobs (i.e., at least 35 hours per week) have you held in your life, including your current job?

Please select the option that best describes your current position.
- Executive
- Manager/Supervisor
- Individual Contributor/Non-supervisory Employee

Please describe your main job duties in a few sentences (e.g., I repair transmissions, I am a cook, I help clients with financial planning, etc.)

Please select the option below that best fits your current industry.

- Construction
- Education
- Health Care & Social Assistance
- Finance & Industry
- Information Technology
- Leisure & Hospitality
- Manufacturing
- Natural Resources & Mining
- Other Services
- Professional & Business Services
- Trade, Transportation, & Utilities
- Government
- Other

How many years have you worked in your current role?

How many hours per week do you work in your current role?

Please select the shift that you most often work.

- Days
- Evenings
- Nights
- Weekends

Please select the option that best describes the setting in which you most often work (in your current position).

- Office/Cubicle
- Home Office
- Client or Field Sites
- Assembly/Manufacturing/Warehouse
- Other

APPENDIX B

EMA SURVEY WORK SETTING, STATUS, & SHIFT ITEMS

Were you officially on company time during the period SINCE YOU SUBMITTED YOUR RESPONSES TO THE PREVIOUS ALERT?

- Yes
- No

Which best describes the shift you were working on during the time SINCE YOU SUBMITTED YOUR RESPONSES TO THE PREVIOUS ALERT?

- Day
- Evening
- Night
- Weekend

Which best describes your work setting during the period SINCE YOU SUBMITTED YOUR RESPONSES TO THE PREVIOUS ALERT?

- Office or Cubicle
- Home Office
- Client or Field Site
- Assembly/Manufacturing/Warehouse
- Other

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